

Sub D1

--74. A method for executing a graphical program in a system comprising a first computer system and a second computer system, wherein the first computer system includes a first CPU and a first memory, wherein the second computer system is coupled to the first computer system, wherein the second computer system includes a second CPU, a second memory, and a display, the method comprising:

compiling a graphical program to produce a compiled graphical program, wherein the graphical program includes a diagram and a graphical user interface;

storing at least a portion of the compiled graphical program in the first computer system;

the first computer system executing the at least a portion of the compiled graphical program, wherein said executing includes:

generating output data for display in the graphical user interface of the graphical program; and

transferring the output data to the second computer system;

the second computer system presenting said graphical user interface on the display during the first computer system executing the at least a portion of the compiled graphical program; and

the second computer system displaying the output data in the graphical user interface of the graphical program in response to said transferring.

75. The method of claim 74,

wherein said executing further includes:

providing information regarding the graphical user interface of the graphical program to the second computer system;

wherein the second computer system presenting said graphical user interface on the display includes the second computer system using the information regarding the graphical user interface to present the graphical user interface on the display.

76. The method of claim 74,

wherein the diagram of the graphical program includes a plurality of connected nodes which visually indicate functionality of the graphical program.

77. The method of claim 74, further comprising:

storing a graphical programming system in the memory of the first computer system; and

creating the graphical program on the first computer system using the graphical programming system in response to user input, wherein said creating the graphical program includes arranging on the display a plurality of nodes comprising the graphical program in response to user input;

wherein said compiling is performed in the first computer system

78. The method of claim 74, wherein said graphical user interface displayed on the second computer system is useable for providing/displaying input/output to/from the at least a portion of the compiled graphical program executing on the first computer system.

79. The method of claim 74, further comprising:

receiving user input to the graphical user interface presented on the second computer system;

the second computer system providing the user input to the first computer system;

the first computer system utilizing the user input during execution of the at least a portion of the compiled graphical program.

80. The method of claim 79, further comprising:

the second computer system displaying the user input in the graphical user interface of the graphical program in response to said receiving user input.

81. The method of claim 74, wherein the graphical program includes a diagram portion comprising a plurality of nodes;

wherein the graphical user interface comprises a graphical front panel separate from the diagram portion.

82. The method of claim 74, wherein the graphical program comprises a virtual instrument;

wherein the first computer system executing the at least a portion of the compiled graphical program performs instrumentation functions.

83. The method of claim 74,
wherein said transferring comprises the first computer system transferring the output data to each of a plurality of second computer systems;

wherein each of the plurality of second computer systems perform said:
presenting said graphical user interface on a respective display of the second computer system during the first computer system executing the at least a portion of the compiled graphical program; and

displaying the output data in the graphical user interface of the graphical program in response to said transferring.

84. A system for executing a graphical program, the system comprising:
a first computer system, wherein the first computer system includes a first CPU and a first memory, wherein the first memory stores a graphical program, wherein the graphical program includes a diagram and a graphical user interface;

a second computer system coupled to the first computer system, wherein the second computer system includes a second CPU, a second memory and a display;

wherein the first computer system is operable to execute at least a portion of the graphical program, wherein, in executing the at least a portion of the graphical program, the first computer system is operable to:

generate output data for display in the graphical user interface of the graphical program; and

transfer the output data to the second computer system;

wherein the second computer system is operable to:
present said graphical user interface on the display; and
display the output data received from the first computer system in the graphical user interface on the display.

85. The system of claim 84,
wherein the diagram of the graphical program includes a plurality of connected nodes which visually indicate functionality of the graphical program.

86. The system of claim 85, further comprising:
wherein the first computer system further stores a graphical programming system;
wherein the graphical programming system is executable to create the graphical program in response to user input, wherein creation of the graphical program includes arranging a plurality of nodes comprising the graphical program on the display in response to user input.

87. The system of claim 84, wherein said graphical user interface displayed on the second computer system is useable for providing/displaying input/output to/from the compiled graphical program executing on the first computer system.

88. The system of claim 84, wherein the second computer system is connected to the first computer system over a network.

89. The system of claim 84, wherein the graphical program comprises a virtual instrument;

wherein the first computer system executing the at least a portion of the graphical program performs instrumentation functions.

90. The system of claim 89, wherein the graphical user interface operates as a front panel of the first computer system which performs instrumentation functions.

91. The system of claim 89, wherein the first computer system includes data acquisition logic for acquiring data from an external source.

92. The system of claim 84, wherein the first computer system executes a compiled version of at least a portion of the graphical program

93. The system of claim 92,
wherein the first computer system is operable to compile the graphical program to produce a compiled graphical program;
wherein the first computer system is operable to execute at least a portion of the graphical program.

94. An instrumentation system, the instrumentation system comprising:
an instrument, wherein the instrument includes a first CPU and a first memory, wherein the first memory stores a graphical program;
a computer system coupled to the instrument, wherein the computer system includes a second CPU, a second memory and a display;
wherein the instrument is operable to execute the graphical program, wherein, in executing the graphical program, the instrument is operable to:
generate output data for display in a graphical user interface; and
transfer the output data to the computer system;
wherein the computer system is operable to:
present the graphical user interface on the display; and
display the output data received from the instrument in the graphical user interface on the display.

95. The system of claim 94,
wherein the graphical program includes a plurality of connected nodes which visually indicate functionality of the graphical program.

96. The instrumentation system of claim 94, wherein the graphical program includes a block diagram and the graphical user interface;

wherein the instrument is operable to execute the block diagram of the graphical program.

97. The system of claim 96,
wherein the block diagram includes a plurality of connected nodes which visually indicate functionality of the graphical program.

98. The instrumentation system of claim 94, wherein the graphical user interface is useable for providing/displaying input/output to/from the graphical program executing on the instrument.

99. The instrumentation system of claim 94,
wherein the instrument is operable to execute the graphical program to perform a measurement function on a received signal.

100. The instrumentation system of claim 94,
wherein the graphical user interface emulates a front panel of the instrument.

101. The instrumentation system of claim 94, wherein the instrument further includes analog to digital (A/D) logic for performing analog to digital conversion on a received signal to produce a digital signal;

wherein the instrument is operable to execute the graphical program to perform the measurement function on the digital signal.

102. The instrumentation system of claim 94, wherein the computer system is coupled to the instrument over a network.